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(54) **IP TERMINAL DEVICE, METHOD FOR ESTIMATING FREQUENCY ERROR RANGE, METHOD OF ESTIMATING FREQUENCY DIFFERENCE AND METHOD OF CALCULATING ESTIMATED REQUIRED TIME**

counter when the first received synchronous timing packet after communication start is received and the count value of the counter clock, when a synchronous timing packet received after that is received and performs phase shift control of the clock generating means according to the estimation results.

(57) Abstract

PROBLEM TO BE SOLVED: To solve the problem where the time during which synchronous control is completed cannot be predicted due to frequency difference being controlled without its being ascertained.

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SOLUTION: This IP terminal device provided with a synchronization function, which receives a synchronous timing packet transmitted by another IP terminal device in a fixed interval and makes an internally generated clock synchronize with the clock of a transmitting side, is provided with the following means. The IP terminal device is provided with a clock generating means for generating an internal clock (1), a clock counter for counting the internal clock generated by the clock generating means (2), and a control means which estimates the frequency difference between the transmitting side clock and the clock generated by the clock generating means, on the basis of the finite difference between the count value of a clock

